

1 Claims

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3 1 A method for the production of transgenic avians,
4 the method comprising the step of using a lentivirus
5 vector system to deliver exogenous genetic material
6 to avian embryonic cells or cells of the testes.

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8 2 A method as claimed in claim 1 wherein the
9 lentivirus vector system includes a lentivirus
10 transgene construct in a form which is capable of
11 being delivered to and integrated with the genome of
12 avian embryonic cells or cells of the testes.

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14 3 A method as claimed in claim 2 wherein the
15 lentivirus construct is injected into the
16 subgerminal cavity of the contents of an opened egg
17 which is then allowed to develop.

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19 4 A method as claimed in claim 2 wherein the
20 construct is injected directly into the sub-
21 blastodermal cavity of an egg.

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23 5 A method as claimed in any of the preceding claims
24 wherein the vector construct transduces germ cells
25 at high efficiency.

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27 6 A method as claimed in any of the preceding claims
28 wherein the genetic material encodes a protein.

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30 7 A transgenic avian produced by a method as claimed
31 in any of the preceding claims.

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- 1 8 A transgenic avian and subsequent transgenic
2 offspring produced as the offspring of a transgenic
3 avian as claimed in claim 7.
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- 5 9 A method for the production of an heterologous
6 protein in avians, the method comprising the step of
7 delivering genetic material encoding the protein
8 within a lentivirus vector construct to avian
9 embryonic cells so as to create a transgenic avian
10 which expresses the genetic material in its tissues.
11
- 12 10 A method as claimed in claim 9 wherein the
13 transgenic avian expresses the gene in the oviduct
14 so that the translated protein becomes incorporated
15 into eggs.
16
- 17 11 A method as claimed in claim 10 further
18 comprising the step of isolating the protein from
19 the eggs.
20
- 21 12 Use of a lentivirus construct for the production
22 of transgenic avians.
23
- 24 13 Use of a lentivirus vector construct for the
25 production of proteins in transgenic avians.
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- 27 14 Use as claimed in claim 13 of lentivirus vector
28 construct for the expression of heterologous
29 proteins in specific tissues, preferably egg white
30 or yolk.
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- 1 15 Use as claimed in any of claims 12 to 14 wherein
2 the lentivirus is chosen from the group consisting
3 of EIAV, HIV, SIV, BIV and FIV.
4
- 5 16 Use as claimed in any of claims 12 to 15 wherein
6 the construct includes suitable enhancer promoter
7 elements for subsequent production of protein.
8
- 9 17 Use as claimed in any of claims 12 to 16 wherein
10 the vector construct particles are packaged to
11 produce vector with an envelope.
12
- 13 18 A method of determining the likelihood of
14 expression of a protein in a transgenic avian, the
15 method comprising the step of detecting expression
16 of the protein in oviduct cells in vitro.